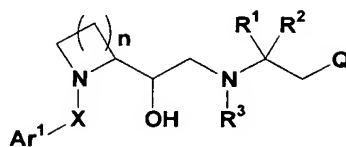


WHAT IS CLAIMED IS:

1. A compound of the formula I



I

wherein:

Ar¹ is a substituted or unsubstituted aryl or substituted or unsubstituted heteroaryl;

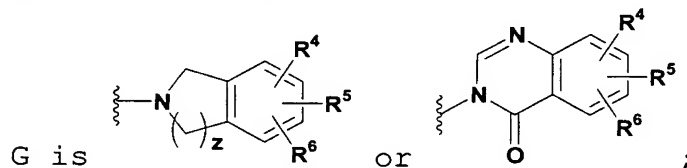
10 X is a linking group selected from the group consisting of alkylene, CO, alkyleneCO, OCO, alkyleneOCO, SO₂ and alkyleneSO₂;

n is an integer from 1 to 4;

15 R¹ and R² are each independently substituted or unsubstituted C₁-C₄ alkyl, or R¹ can be cyclized with R² to form (-CH₂-)ₘ where m is an integer from 2 to 5;

R³ is hydrogen(H) or alkyl;

Q is Ar¹ or G;



20 z is 1 or 2; and

R⁴, R⁵ and R⁶ are each independently selected from the group consisting of hydrogen, halo, haloalkyl, alkyl, alkoxy, haloalkoxy, hydroxy, cyano, nitro, amino, alkylamino and alkylthio;

25 including all prodrug esters, pharmaceutically acceptable salts or stereoisomers thereof.

2. The compound as defined in claim 1

wherein:

30 X is alkylene

n is an integer from 1 to 3;

R³ is hydrogen(H) or methyl; and

Q is selected from Ar¹, substituted or unsubstituted phenyl, substituted or unsubstituted naphthyl or substituted or unsubstituted benzothiophene;

including all prodrug esters, pharmaceutically acceptable salts or stereoisomers thereof.

3. The compound as defined in claim 1 wherein:

X is alkylene;

n is 2;

R¹ and R² are methyl, or R¹ can be cyclized with R² to form a cyclopropyl ring;

R³ is hydrogen; and

Q is substituted or unsubstituted phenyl or substituted or unsubstituted naphthyl.

4. The compound as defined in claim 1 wherein:

X is alkylene;

n is 2;

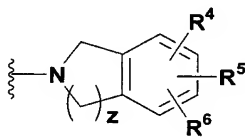
R¹ and R² are methyl, or R¹ can be cyclized with R² to form a cyclopropyl ring;

R³ is hydrogen;

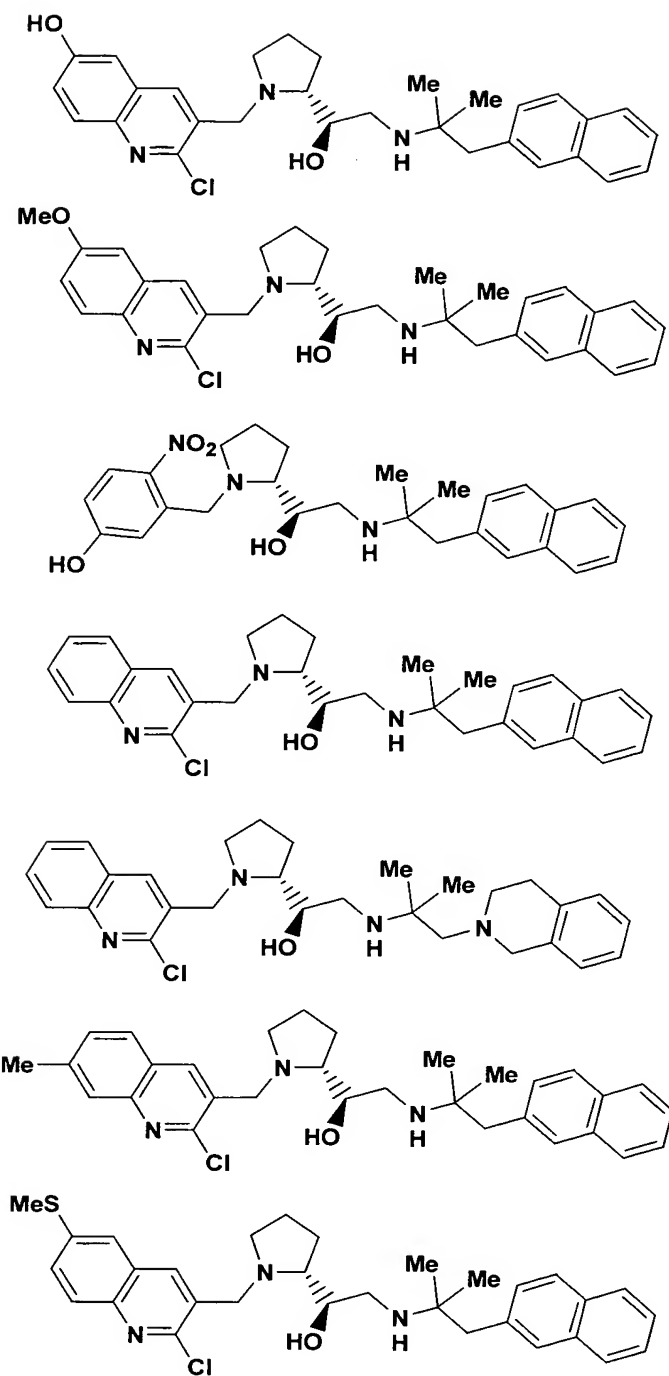
Q is G where G is

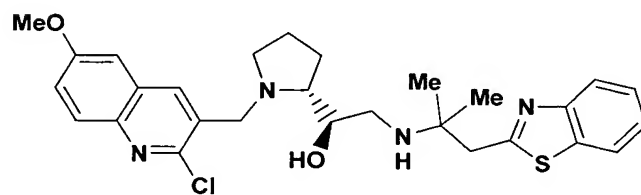
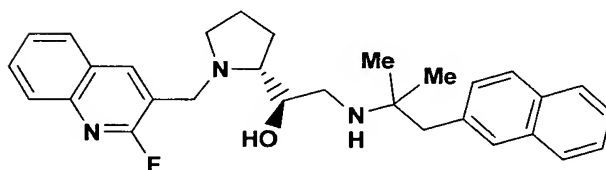
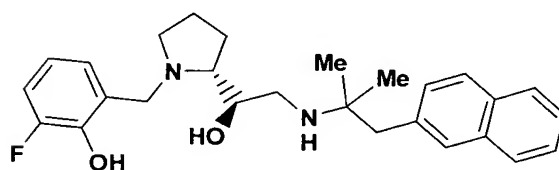
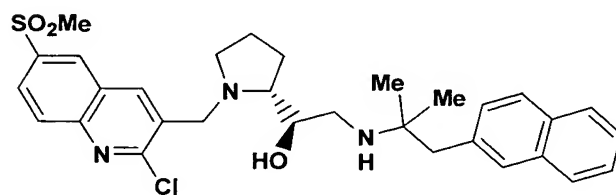
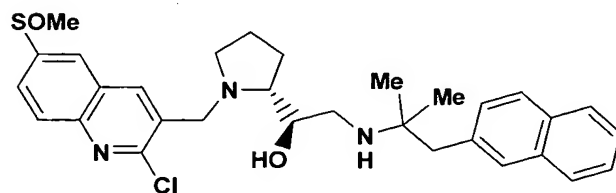
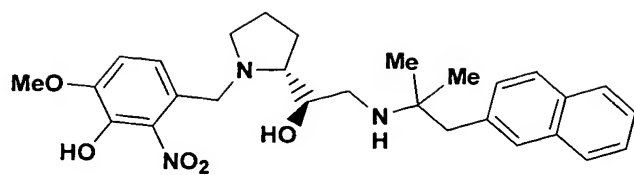
z is 2; and

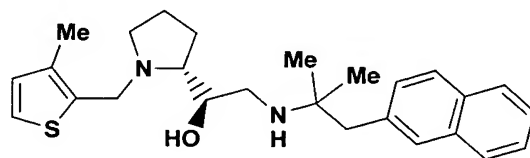
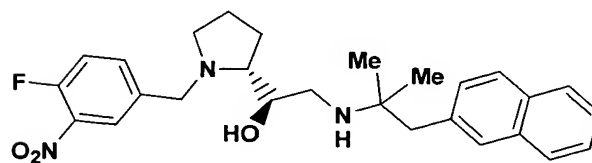
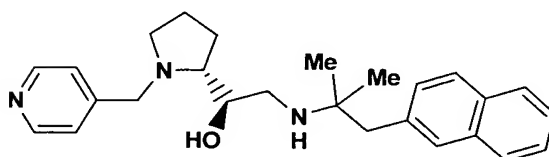
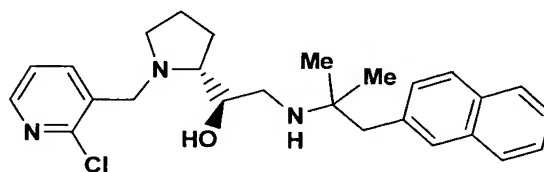
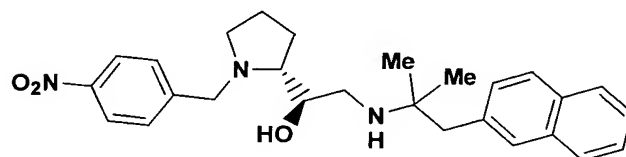
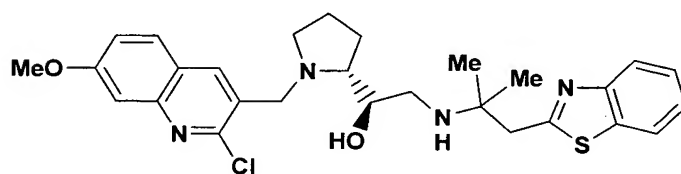
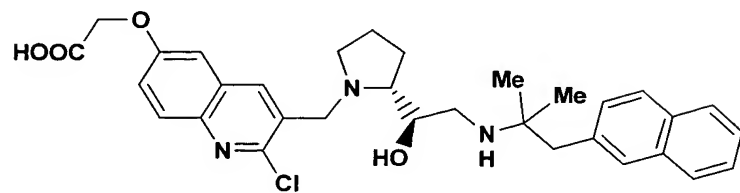
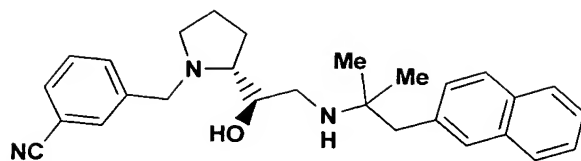
R⁴, R⁵ and R⁶ are H.



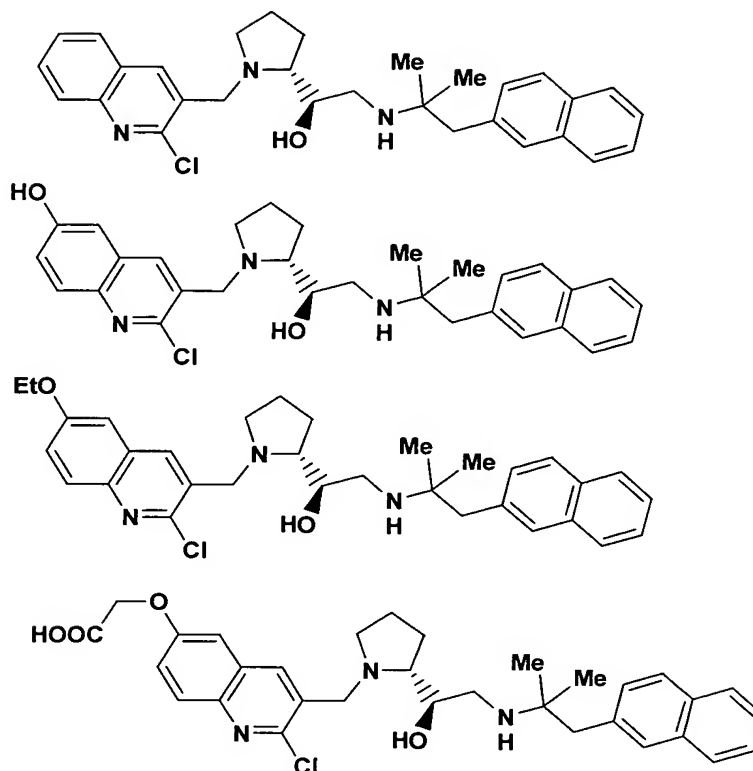
5. The compound as defined in claim 1 wherein the compound is selected from:







6. The compound as defined in claim 1 wherein the compound is selected from:



5

7. A pharmaceutical composition comprising a compound as defined in claim 1 and a pharmaceutically acceptable carrier therefor.

10

8. The pharmaceutical composition of claim 7 further comprising at least one additional therapeutic agent selected from the group consisting of other compounds of formula I, anti-osteoporosis agents, cholesterol/lipid lowering agents, growth promoting agents, progesterone receptor agonists, modulators of bone resorption, selective estrogen receptor modulators, selective androgen receptor modulators, anti-resorptive agents, hormone replacement therapies, vitamin D, vitamin D analogues, elemental calcium, calcium supplements, cathepsin K inhibitors, MMP inhibitors, vitronectin

15
20

receptor antagonists, Src SH₂ antagonists, Src kinase inhibitors, vacular - H⁺- ATPase inhibitors, PTH, PTH analogues and fragments, osteoprotegrin, Tibolone, p38 inhibitors, prostanoids, PPAR gamma antagonists and
5 isoflavinoids.

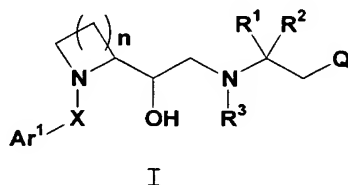
9. A method for treating or delaying the progression or onset of hypoparathyroidism, osteosarcoma, chondrosarcoma, periodontal disease, fracture healing,
10 osteoarthritis, Paget's disease, osteopenia, glucocorticoid induced osteoporosis, osteomalacia, osteoporosis, metastatic bone disease or joint replacement, which comprises administering to a mammalian species in need of treatment a therapeutically effective
15 amount of a compound as defined in Claim 1.

10. The method according to claim 9 further comprising administering, concurrently or sequentially, a therapeutically effective amount of at least one
20 additional therapeutic agent selected from the group consisting of other compounds of formula I, anti-osteoporosis agents, cholesterol/lipid lowering agents, growth promoting agents, progesterone receptor agonists, modulators of bone resorption, selective estrogen
25 receptor modulators, selective androgen receptor modulators, anti-resorptive agents, hormone replacement therapies, vitamin D, vitamin D analogues, elemental calcium, calcium supplements, cathepsin K inhibitors, MMP inhibitors, vitronectin receptor antagonists, Src SH₂
30 antagonists, Src kinase inhibitors, vacular - H⁺- ATPase inhibitors, PTH, PTH analogues and fragments, osteoprotegrin, Tibolone, p38 inhibitors, prostanoids, PPAR gamma antagonists and isoflavinoids.

35 11. A method of enhancing bone formation in a mammalian species comprising administering a

therapeutically effective amount of a compound as defined in Claim 1 to a patient in need thereof.

12. A pharmaceutical composition capable of
 5 modulating the calcium sensing receptor comprising a compound of formula I



10 wherein:

Ar¹ is a substituted or unsubstituted aryl or substituted or unsubstituted heteroaryl;

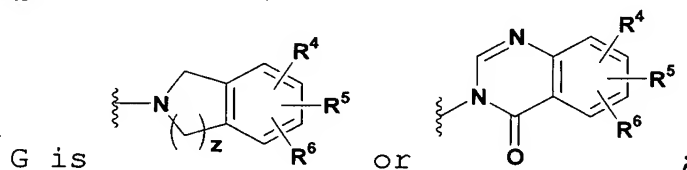
X is a linking group selected from the group consisting of alkylene, CO, alkyleneCO, OCO, alkyleneOCO,
 15 SO₂ and alkyleneSO₂;

n is an integer from 1 to 4;

R¹ and R² are each independently substituted or unsubstituted C₁-C₄ alkyl, or R¹ can be cyclized with R² to form (-CH₂-)ₘ where m is an integer from 2 to 5;

20 R³ is hydrogen(H) or alkyl;

Q is Ar¹ or G;



z is 1 or 2; and

25 R⁴, R⁵ and R⁶ are each independently selected from the group consisting of hydrogen, halo, haloalkyl, alkyl, alkoxy, haloalkoxy, hydroxy, cyano, nitro, amino, alkylamino and alkylthio;

including all prodrug esters, pharmaceutically acceptable salts or stereoisomers thereof.

30

13. The pharmaceutical composition of claim 12 wherein said composition is a calcium sensing receptor antagonist.

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